

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 41

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte PETER JOCHUM, RAINER GUGGENBERGER,  
GUNTHER LECHNER and KLAUS ELLRICH

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Appeal No. 95-1999  
Application No. 08/047,381<sup>1</sup>

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HEARD: February 8, 1999

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Before JOHN D. SMITH, WEIFFENBACH and LIEBERMAN,  
Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 39 through 44, as amended after the final

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<sup>1</sup> Application for patent filed April 16, 1993. According to appellants, this application is a continuation of Application No. 07/452,407 filed December 19, 1989, now abandoned.

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rejection (see the amendment dated April 28, 1994), and the advisory action dated May 12, 1994.

### **THE INVENTION**

Appellants' invention is directed to a temporary dental restorative material having four components present as follows:

1. 10-99.999% by weight of a bifunctional or polyfunctional acrylic or methacrylic acid ester dental compound.
2. 0.001 to 5% by weight of a polymerization initiator system.
3. Optionally an auxiliary agent, and
4. 0.001 to 10% by weight of an alpha aryl styrene which may be further substituted either on the aryl ring, the vinyl group or both. The claimed invention further requires that the composition be suitable for preparing a hard and inflexible dental restorative material.

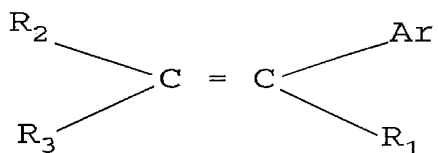
### **THE CLAIMS**

Claim 39 is illustrative of appellants' invention and is reproduced below:

39. A dental composition, comprising the following ingredients (a), (b), (c) and (d) in the amounts indicated:

(a) 10-99.999% by weight of a bifunctional or polyfunctional acrylic-acid and/or methacrylic-acid ester dental compound;

(b)  
by weight of  
system  
initiating  
polymerizati  
the % by  
based on the  
of (a) + (b)



0.001 to 5%  
an initiator  
capable of  
radical  
on, wherein  
weight is  
total weight  
+ (c);

(c) 0 to 89.999% by weight of an auxiliary agent, wherein the % by weight is based on the total weight of (a) + (b) + (c); and

(d) 0.001 to 10% by weight, based on the weight of the % of (a), of a dental compound of the general formula:

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in which:

Ar and R<sub>1</sub>, which are the same or different, represent aryl or substituted aryl, which is substituted by straight-chain or branched-chain C<sub>1-18</sub>-alkyl, C<sub>1-18</sub>-alkoxy, carboxyl-C<sub>1-17</sub>-alkyl or halogen,

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$R_2$  and  $R_3$ , which are the same or different, represent hydrogen, aryl or substituted aryl, which is substituted by straight-chain or branched-chain  $C_{1-18}$ -alkyl,  $C_{1-18}$ -alkoxyl, carboxyl- $C_{1-17}$ -alkyl or halogen, or represent straight-chain or branched chain  $C_{1-18}$ -alkyl,  $C_{1-18}$ -alkoxyl,  $C_{1-17}$ -alkoxycarbonyl, in which alkyl and alkoxyl can be substituted by halogen or aryl,

in which,  $R_2$ , when represented by aryl or substituted aryl, which is substituted by straight-chain or branched-chain  $C_{1-18}$ -alkyl,  $C_{1-18}$ -alkoxy, carboxyl- $C_{1-17}$ -alkyl or halogen, or when represented by  $C_{1-18}$ -alkyl or  $C_{1-18}$ -alkoxyl, or  $R_1$  can be linked with Ar by a single bond, and

in which, Ar, when represented by phenyl,  $C_{1-18}$ -alkylphenyl,  $C_{1-18}$ -alkoxyphenyl, carboxyl- $C_{1-17}$ -alkylphenyl or halogenphenyl,  $R^2$  can be represented by -O-, which is linked with the phenyl or phenyl moiety of Ar to a benzofuran, and

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in which, at least one of  $R^2$  or  $R^3$  represents  $H_i$  and

with the proviso that said composition is suitable for preparing a temporary dental restorative material having a hard and inflexible consistency.

#### THE REFERENCES OF RECORD

The Examiner relied upon the following references of record.

Foley, Jr. (Foley)	4,243,790	Jan. 6,
1981		
Strüver et al. (Strüver)	4,319,015	Mar.
9, 1982		

#### THE REJECTIONS

Claims 39 through 44 stand rejected under 35 U.S.C. § 103 as unpatentable over Foley or Strüver.<sup>2</sup>

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<sup>2</sup> In the Final Rejection dated 02/08/94, the examiner rejected claims 23 through 38. Two proposed amendments, both dated April 28, 1994, were submitted. The first proposed amendment canceled claims 23 through 38 and added claims 39 through 44. The proposed supplemental amendment added claims 45 through 47. In an advisory action dated 05/12/94, the  
(continued...)

**OPINION**

Appellants submit that the claims on appeal can be divided into two different groups. Group I including claims 39 through 41 contained the transitional phrase, "comprising." Group II including claims 42 through 44 contained the transitional phrase, "consisting essentially of." In contrast to appellants' position, our decision is based upon issues, which, in our analysis, are common to and shared by each of the claims before us. Accordingly, we do not find it necessary to separately discuss the two groups of claims established by appellants. We will therefore, substantially confine our discussion to that of claim 39.

Foley teaches a contact lens forming composition containing the three requisite components of the claimed invention: a bifunctional acrylic acid ester, an initiator system and a styrene type monomer. The bifunctional acrylic acid ester is disclosed in column 2, lines 30-38 and typically

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<sup>2</sup>(...continued)  
examiner indicated that, upon appeal, claims 39 through 44 would be entered. However, entry of claims 45 through 47 was refused. Accordingly, only claims 39 through 44 are before us for our consideration.

is a hydroxy alkyl acrylate or methacrylate. It is bifunctional in that it contains both an acrylyl or methacrylyl group and hydroxy functionality. The initiator system is disclosed in column 5, lines 13-20. The styrene type monomer includes alpha-aryl styrene as required by the instant claim. See column 3, line 44. Although, this composition per se appears to be substantially that required by claim 39, the examiner has either ignored or misinterpreted critical limitations of claim 39. Accordingly, we will not sustain the examiner's rejection.

Claim 39 requires that the composition be a dental composition containing a dental compound which is a bifunctional or polyfunctional acrylic ester. Moreover, there is a requirement in claim 39 that states, "with the proviso that said composition is suitable for preparing a temporary dental restorative material having a hard and inflexible consistency." The examiner argues that, "the proviso reciting intended use will not be given patentable weight because the intended composition is directed to two monomers (acrylic acid or ester and styrene) and an initiator. The proviso reciting

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intended use is directed to the product." See the Examiner's Answer, page 6.

We disagree. Claim 39 is drawn to a dental composition containing components present in such amounts and having the requisite characteristics of forming a hard and inflexible consistency upon polymerization. The proviso the examiner refers to is not a statement of ultimate intended utility. It describes, in functional language, indispensable characteristics that must be present in the monomeric components required by the claimed invention. Claim 39 provides in essence that one may choose specific monomers from among those falling within the requirements of the claim provided, however, that the monomers chosen result in a temporary dental restorative material having a hard and inflexible consistency. Hence the proviso of claim 39 constitutes both a further description and a limitation of the initial components chosen. The proviso of claim 39 has been treated by the examiner as directed only to the final product. We find that neither the dental limitations nor the proviso of claim 39 can be ignored. In view of our findings, the examiner's legal conclusion of obviousness is not supported by



facts. "Where the legal conclusion of obviousness is not supported by facts it cannot stand." In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

Even, were we to find that the teachings of Foley were sufficient to establish a prima facie case of obviousness, and we do not so find, the evidence set forth in the Guggenberger Declaration would be sufficient such that the totality of the record, by a preponderance of the evidence, would require us to reverse the position of the examiner. The examiner has determined that, "the [Guggenberger] 132 declaration fails to set forth unexpected results over the prior art since it is directed to the end product rather than the monomers or initiators of the instant invention." See the Examiner's Answer, page 6. We do not agree. As we found above, substantive consideration must be given both to the, "proviso" and the dental limitations of claim 39. Hence, we evaluate the evidence present in the Guggenberger Declaration.

In our evaluation of the declaration, we have given weight only to the comparative evidence directed to 1,1-diphenylethylene. The portions of the declaration drawn to styrene have not been considered. That part of the

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declaration is not directed to relevant evidence as claim 39, as amended and now before us, precludes the presence of styrene. Claim 39 now requires the presence of two aryl groups on the same carbon.

In section 1.1 of the declaration, declarant prepared compositions F1 and F2. These compositions are made using a preferred bifunctional monomer of Foley, hydroxy ethyl methacrylate. The composition also contains appellants' preferred diphenylethylene in amount of 5% reflecting appellants' claimed proportion and 30% reflecting Foley's preferred proportions. Upon polymerization in the manner suggested by Foley, column 5, lines 13-28, declarant observes solutions F1 and F2 did not harden under the given conditions.

Similarly, in section 1.2 of the declaration, declarant prepared three compositions designated A1, A2 and A3. The first two compositions prepared according to appellants' invention contained 0.02% and 5% 1,1-diphenylethylene respectively. The third composition outside the scope of appellants' invention contained 30% of 1,1-diphenylethylene. Declarant observed in the Results, section 4.2 that A1 and A2 set. A3 did not set.

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We find the evidence presented in the declaration sufficient to establish that Foley's preferred monomer, hydroxy ethyl methacrylate, does not result in a composition within the scope of appellants' invention. We further find that even when one uses monomers within the scope of appellants' invention, the preferred monomeric proportions suggested by Foley, i.e. 30% by weight, do not result in a composition having the requisite physical characteristics of appellants' invention. We also find ourselves in agreement with appellants' position that the results of the declaration evidence the patentability of the claimed invention since, "the claimed compositions possess unexpected and advantageous properties when compared with dental materials using a composition taught in the Foley, Jr. reference." See appellants' Brief, page 15, lines 12-16. After reviewing the evidence and argument submitted by appellants together with the argument of the examiner, based on the totality of the record and the preponderance of the evidence, we are unable to sustain the rejection of claims 39-44 as being unpatentable over Foley. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

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We next turn to the rejection over the Strüver reference. We will not sustain the rejection of the examiner over Strüver. Claim 39 requires the presence of an alpha aryl styrene. We are in agreement with appellants' arguments presented at the Hearing that Strüver does not contemplate the use of alpha aryl styrene as now required by claims 39 through 44. The styrene compounds generically taught by Strüver are either substituted on the benzene nucleus or on the side chain by C<sub>1</sub>-C<sub>4</sub> alkyl groups. See Strüver, column 2, lines 4-8 and 19-26. In order to come within the scope of claim 39, the side chain would necessarily have to be substituted by an aryl group. There is no such teaching or suggestion by Strüver. Hence, no prima facie case of obviousness can be established.

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**DECISION**

The rejection of claims 39 through 44 as unpatentable  
over Foley or Strüver under 35 U.S.C. § 103 is reversed.

**REVERSED**

JOHN D. SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
CAMERON WEIFFENBACH	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
PAUL LIEBERMAN	)	
Administrative Patent Judge	)	

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